

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte REINHOLD KLIPPER, WERNER STRUVER,  
ULRICH SCHNEGG, RUDIGER SEIDEL,  
ALFRED MITSCHKER and HOLGER LUTJENS

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Appeal No. 2004-0828  
Application No. 09/643,194

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ON BRIEF

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Before KRATZ, DELMENDO, and PAWLIKOWSKI, Administrative Patent Judges.

KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-15, which are all of the claims pending in this application.

**MAILED**

**MAR 31 2004**

**PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES**

BACKGROUND

Appellants' invention relates to a process of preparing a resin having anion exchange properties. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A process for preparing monodisperse anion exchangers comprising
  - (a) reacting monomer droplets made from at least one monovinylaromatic compound and at least one polyvinylaromatic compound to give a monodisperse, crosslinked bead polymer,
  - (b) amidomethylating the monodisperse, crosslinked bead polymer from step (a) with phthalimide or methylphthalimide,
  - (c) converting the amidomethylated bead polymer from step (b) to an aminomethylated bead polymer, and
  - (d) alkylating the aminomethylated bead polymer from step (c).

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Corte et al. (Corte)	3,006,866	Oct. 3, 1961
Timm	4,444,961	Apr. 24, 1984
Klipper et al. (Klipper)	4,952,608	Aug. 28, 1990

Claims 1-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of Klipper, Timm and Corte.

We refer to the briefs and to the answer for a complete exposition of the opposing viewpoints expressed by appellants and the examiner concerning the issues before us on this appeal.

OPINION

Having carefully considered each of appellants' arguments set forth in the briefs, as well as the declaration evidence presented, appellants have not persuaded us of reversible error on the part of the examiner. Accordingly, we will affirm the examiner's rejection for substantially the reasons set forth by the examiner in the answer. Moreover, we agree with the examiner's rebuttal of appellants' arguments and declaration evidence as set forth in the answer. We add the following for emphasis.

Appellants (brief, page 3) state that "[c]laims 1-15 are appealed together." Also, appellants do not furnish separate arguments for each claim on appeal. See 37 CFR § 1.192(c)(7) and (c)(8)(2002) and In re McDaniel, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) ("if the brief fails to meet either requirement, the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected

representative claim"). Consequently, we select claim 1, as the representative claim, on which we decide this appeal as to the examiner's rejection.

Klipper discloses a method for preparing anion exchangers. An organic polymer (bead) containing aromatic nuclei, such as polymers prepared via the mixed polymerization of mono- and polyvinyl compounds, are subjected to amidomethylation followed by aminomethylation steps. See, e.g., column 2, lines 6-26 and column 4, lines 17-62 of Klipper. Also, Timm<sup>1</sup> teaches how to prepare uniformly sized (monodispersed) polymer beads from mono and polyvinyl monomers (droplets). See, e.g., examples 1 through 6 of Timm. Those beads are described as being useful in the preparation of ion exchange resins (Timm, column 14, lines 49-54). Based on the combined teachings of Klipper and Timm, we agree with the examiner that it would have been prima facie obvious to one of ordinary skill in the art to employ the uniformly sized (monodispersed) beads of Timm as the macroporous organic polymer to be amidomethylated and aminomethylated in

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<sup>1</sup> We note that appellants' basically acknowledge that their claimed monodispersed bead polymer formation method (claim 1, step a) is known. Appellants refer to prior art documents including, inter alia, U.S. Patent No. 4,444,961 (the applied Timm patent), for teaching such a method. See, e.g., page 1, lines 3-5 and page 2, lines 27-32 of appellants' specification.

Klipper to obtain an anion exchanger product. After all, Klipper (column 4, lines 21 and 22) teaches that the polymers to be amidomethylated therein are known and obtained in a conventional way and Timm provides such a known polymer that is suggested by Timm as being useful in preparing ion exchange resins. As for the claimed alkylating step, the examiner (answer, pages 4 and 5) has determined that Corte suggests such a step as being useful in forming an anion exchanger. Such an anion exchanger is taught by Klipper and Timm. Consequently, we determine that the reference evidence adduced by the examiner establishes the prima facie obviousness of representative claim 1.

Appellants' contention (brief, page 8) that the examiner did not make a finding as to the differences between the subject matter of representative claim 1 and the applied prior art is not well taken for reasons as evidenced by a reading of the examiner's answer, particularly at pages 4 and 5. Similarly, we cannot agree with appellants' supposition (brief, page 5) that the examiner is basing the position set forth in the rejection on facts within the personal knowledge of the examiner as opposed to facts established by the applied references. We note, for example, that the examiner has referred to specific teachings of each of the applied references in the rejection set forth in the

answer, not facts that the examiner has asserted as generally known but not found in the applied references.

Concerning the rebuttal evidence referred to in the brief (presumably the declaration under 37 CFR § 1.132 of co-inventor, Reinhold Klipper filed September 16, 2002), we agree with the examiner's criticism thereof as set forth at pages 6 and 7 of the answer. To the extent that appellants are asserting that the examples furnished in the specification and the tests reported in the declaration establish unexpected results for the claimed method, we note that the question as to whether unexpected advantages have been demonstrated is a factual question. In re Johnson, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984). Thus, it is incumbent upon appellants to supply the factual basis to rebut the prima facie case of obviousness established by the examiner. See, e.g., In re Klosak, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). Appellants, however, do not provide an adequate explanation regarding any factual showing in the specification and declaration, that is referred to in the briefs, to support a conclusion of unexpected advantages.

In particular, appellants have not furnished test results that are reasonably commensurate in scope with the here claimed invention. We note that representative claim 1 is not limited to

the specific method steps, including the materials used therein, as outlined in the referenced Example 2 of the specification and as also employed in the tests reported in the declaration. In this regard, we note that the Example 2 monodispersed anion exchanger is prepared starting with a bead polymer from Example 1d, which bead polymer was prepared using microencapsulated monomer droplets made with specified amounts of styrene, divinylbenzene and ethylstyrene. The microcapsules used are "composed of a formaldehyde-hardened complex coacervate made from gelatin" (specification, page 11, lines 27 and 28) and from a specified copolymer with a particular particle size. Step (a) of representative claim 1 is not so limited. Similarly steps (b) through (d) of representative claim 1 are not limited to the specific steps used in forming the tested exchanger. Compare claim 1 with steps 1b through 1d at pages 12 -14 of appellants' specification. Thus, it is apparent that appellants' evidence is considerably more narrow in scope than the representative appealed claim 1. See In re Dill, 604 F.2d 1356, 1361, 202 USPQ 805, 808 (CCPA 1979).

Moreover, appellants simply have not shown that the example prepared for comparison, a heterodispersed exchanger disclosed as being prepared by a general method of the applied Corte patent

without describing the particulars of each step employed and materials used (declaration, pages 1 and 2) represents the closest prior art. Hence, we are not satisfied that the evidence of record that is offered demonstrates results that are truly unexpected and commensurate in scope with the claims. Nor have appellants satisfied their burden of explaining how the results reported for those limited examples presented can be extrapolated therefrom so as to be reasonably guaranteed as attainable through practicing the invention as broadly claimed.


Having reconsidered all of the evidence of record proffered by the examiner and appellants, we have determined that the evidence of obviousness, on balance, outweighs the evidence of nonobviousness. Hence, we conclude that the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art. Accordingly, we affirm the examiner's § 103 rejection.

#### CONCLUSION

To summarize, the decision of the examiner to reject claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of Klipper, Timm and Corte is affirmed.



AFFIRMED

  
BEVERLY A. PAWLIKOWSKI  
Administrative Patent Judge

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